APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,104	11/13/2001	Igor Katz	KATZ10	6460

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EXAMINER
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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/987,104	KATZ ET AL.
		Examiner	Art Unit	
		Joseph E. Avellino	2143	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 February 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-6_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-6_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _02/24/05_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-6 are pending in this examination; claim 1 independent.

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

        Claims 1, and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by

Falls et al. (USPN 5,991,771) (hereinafter Falls).

3.   Referring to claim 1, Falls discloses a distributed system including a server

managing a master volume of data including at least a plurality of at least one static

attribute and at least one dynamic attribute whose prevailing values in the master

volume of data are respectively updated and not updated as a consequence of a

command from a client, and at least two clients C1 and C2 each managing a volume of

data intended to mirror the master volume of data, a method for data mirroring

restoration at a client freshly reconnected to the server after a communication downtime

period, the method comprising the steps of:

        storing prevailing values of dynamic attributes of the master volume of data in

temporary storage at the server (i.e. current PTID) (col. 15, lines 49-54);

        storing prevailing values of static attributes of the master volume of data in

persistent storage at the server (i.e. change updates) (col. 15, lines 49-54);

providing the server with a master synchronization counter V_s incremented by the updating of the prevailing values of one or more static attributes in the master volume of data as a consequence of a command from a first client C1 of the at least two clients (i.e. PTID of the first server) (col. 14, line 45 to col. 15, line 12);

providing each client with a synchronization counter V_c (i.e. the PTID of the other servers), the synchronization counter V_{c2} of a second client C2 of the at last two clients only being synchronized with the master synchronization counter V_s on the successful uploading of the prevailing values of the static attributes updated in the master volume of data as a consequence of the command from the first client C1 whereby its volume of data mirrors the master volume of data (i.e. when requested by a user) (col. 16, lines 24-34; col. 17, lines 1-37);

uploading from the master volume of data to the freshly reconnected client's volume of data the prevailing values of all its dynamic attributes (i.e. updated PTID) and, in the case that the synchronization counter $V_{c2}< V_s$, the prevailing values of at least all of its static attributes whose prevailing values were updating during the communication downtime period, otherwise in the case that $V_s = V_{c2}$, taking no data mirroring restoration action in respect of the static attributes (A has the last PTID of 50:14, whereas B has the PTID of 50:10, therefore A will transmit the updates of 50:11 to 50:14, and therefore will have a PTID of 50:14 as well as all updates corresponding up to that point, whereas the PTID of both A and B is 150:13, therefore no data mirroring occurs, since no updating has been done since the last updating) (col. 17, lines 1-37).

4.   Referring to claim 3, Falls discloses providing the server with a transaction log
(i.e. update log or update stream) for listing up to N data object identifiers of data
objects containing at least one static attribute on a FIFO basis (updates are transmitted
50:11 up to 50:14, thereby the oldest is updated first) in respect of the updating of the
prevailing values of one or more of their static attributes, and uploading from the master
volume of data to the freshly reconnected client's volume of data the prevailing values
of all the static attributes of the last V_S-V_{C2} data objects listed in the transaction log in
the case that V_S-V_{C2} <= N (i.e. only updates 50:11-50:14 are transmitted, not 50:1-
50:10, since the server has already received those updates) (col. 17, lines 1-27).

5.   Referring to claim 4, Falls discloses when the transaction log is full, deleting an
earlier listing of a data object therefrom, if it exists, on adding the same data object
thereto, whereby the transaction log (i.e. replica managers 46) contains at most only a
single listing of a data object (i.e. PTID), if at all (i.e. the replica manager keeps the last
transaction number for each PTID)(col. 20, lines 42-59).

6.   Claims 5 and 6 are rejected for similar reasons as stated above. Since claims 5
and 6 are multiple dependent claims, they have been treated as depending upon claim
1.

Claim Rejections - 35 USC § 103

7.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Falls in

view of Birkler.

8.   Referring to claim 2, Falls discloses the invention substantively as disclosed in

claim 1. Falls does not disclose uploading all static values from the master volume of

data when the synchronization counter is $V_{c2} < V_s$. In analogous art, Birkler discloses

another method to update a mirror database wherein all static values from the master

volume of data when the synchronization counter is $V_{c2} < V_s$ (Figures 3B-3D, ref. 360,

480; and related portions of the disclosure). It would be obvious to a person of ordinary

skill in the art at the time the invention was made to combine the teaching of Falls with

Birkler since Falls discloses that a multitude of mobile computers can be connected with

the invention such as PDA's, laptops, and palmtops (col. 3, lines 35-45). This would

lead one of ordinary skill to search for other computer devices with which would benefit

from synchronizing databases with each other, Eventually finding the system of Birkler

which discloses being able to synchronize with pagers and car cradles (col. 4, lines 21-

38).

Response to Arguments

9.   Applicant's arguments filed February 24, 2005 have been fully considered but they are not persuasive.

10.   Applicant argues, in substance, that (1) Falls does not disclose storing dynamic attributes of the master volume of data in temporary storage at the server, (2) Falls does not differentiate storing these different attributes at different locations.

11.   As to point (1) the Office respectfully disagrees. Applicant employs broad language (i.e. "dynamic attributes" and "static attributes"), which can construe a plurality of meanings within the art. Applicant does not argue any further meaning of these terms, merely that Falls does not disclose the "dynamic attributes". Therefore the Office takes these terms as broadly as can be construed in the art. See In re Prater and Wei, 162 USPQ 541 (CCPA 1969), and MPEP 2111. Therefore, the Office takes the term "dynamic attribute" as any data field, which changes constantly. Applicant's attention is directed to col. 15, lines 48-54. The server of Falls (i.e. the master volume of data) transmits changes in the master volume of data (i.e. the static attributes) to the clients and issues a PTID for each change. Thus, each change gets a new PTID, thereby allowing independent updates affecting different attribute groups of an object to be automatically merged without the updates being treated as a crash (col. 15, lines 8-12). This means that the consistency distributor 74 has the current PTID as a dynamic attribute of the master volume of data (i.e. the PTID changes constantly since updates

are constantly being transmitted), therefore it can be construed as a "dynamic attribute

of a master volume of data". If this current PTID was not updated constantly, then client

databases will not receive the most recent transactions and would by out of sync. By

this rationale, Falls does, in fact, disclose storing "dynamic attributes" of the master

volume of data.

12.   As to point (2) the Office respectfully disagrees. Applicant's attention is directed

to col. 14, lines 55-65 which discloses that the PTID and the update log is not required

to be stored in non-volatile storage device, whereas the static attributes (i.e. the data

replicas) of the master volume would be stored in non-volatile storage (Figure 2, ref. 54

and 56; col. 13, lines 32-39). By this rationale this rejection is maintained.

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

14.   Applicant employs broad language, which includes the use of word, and phrases,

which have broad meanings in the art (i.e. "dynamic attributes" and "static attributes").

In addition, Applicant has not argued any narrower interpretation of the claim language,

nor amended the claims significantly enough to construe a narrower meaning to the

limitations. As the claims breadth allows multiple interpretations and meanings, which

are broader than Applicant's disclosure, the Examiner is forced to interpret the claim

limitations as broadly and as reasonably possible, in determining patentability of the

disclosed invention. Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See In re Van Geuns, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Failure for Applicant to significantly

narrow definition/scope of the claims and supply arguments commensurate in scope

with the claims implies the Applicant intends broad interpretation be given to the claims.

The Examiner has interpreted the claims with scope parallel to the Applicant in the

response, and reiterates the need for the Applicant to more clearly and distinctly define

the claimed invention.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph E. Avellino whose telephone number is (571)

272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JEA
April 11, 2005

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